

BLUE

Must ship LATEST JAN 20

Work Order ID 65197

January 7, 2011 2:33:53 PM

Item ID: D4308-042

Accept

Revision ID:

Item Name: Step Weldment Assembly RH

Start Date: 1/07/11

Start Qty: 1.00

Required Date: 1/13/11

Req'd Qty: 1.00

Reference:

Approvals:

Process Plan: 

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run

Start

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

Draw Nbr

Revision Nbr

100



Large Fab

Large Fab

Large Fab

Memo

1-Cut D4308-1 using D2622 extrusion as per Dwg D4308  
2-Deburr and bevel ends for welding

0.00

0.00

110



QC

Quality Control

QC6- Inspect dimensions to drawing

Memo

Reinspect to PA 2 Dwg.

Subsize (E1)

0.00

0.00

120



Large Fab

Large Fab

Weld per dwg A/R Aluminum rod Batch: M108436

Large Fab

Memo

1-Weld end cap (ONE END ONLY)  
2-weld lugs as per Dwg D4308  
3-Grind end cap welds flush

0.00

0.00




PRELIMINARY ISSUE Page 1



Phs -> Pax  
E + R- inspected to PA1  
Dwg only  
Subsize (H)11.01.10  
11.01.12




# Work Order ID 65197

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Page 2

Item ID:	D4308-042	Accept		Setup	Start	
Revision ID:						
Item Name:	Step Weldment Assembly RH				Stop	
Start Date:	1/07/11	Start Qty:	1.00	Cust Item ID:		
Required Date:	1/13/11	Req'd Qty:	1.00	Customer:		
Reference:						

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	
	QC:	Date:	SPC (Y/N):	Date:		Stop	

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130  QC Quality Control	QC9- Inspect visual per QSI004- Fusion Welds  Memo	0.00  0.00			<del>DE</del> <del>DE</del>	1 1	0 0	11/01/12 11/01/10	
140  QC Quality Control	QC5- Inspect part completeness to step on W/O  Memo	0.00 0.00			<del>inspect to pay</del> <del>Day only</del> <del>Sub 1/10</del>			inspect to PAC Day 11/01/13	<del>+</del> <del>+</del>
150  HandFinish Hand Finishing	Chemical Conversion Coat per QSI005 4.1  Memo	0.00 0.00			<del>Hi</del> <del>Hi</del>				<del>+</del> <del>+</del>

# Work Order ID 65197

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Item ID:	D4308-042	Accept		Setup	Start	
Revision ID:						
Item Name:	Step Weldment Assembly RH			Stop		
Start Date:	1/07/11	Start Qty:	1.00			
Required Date:	1/13/11	Req'd Qty:	1.00			
Reference:						

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	
	QC:	Date:	SPC (Y/N):	Date:		Stop	

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160  QC Quality Control	QC3- Inspect Part Finish  Memo	0.00 - inspect to PA1 Dwg only Sulata @							
170  Large Fab Large Fab	Weld per dwg A/R Aluminum rod Batch: M108436 Large Fab Memo 1-Inspect for foreign object per QSI 024 2-Weld Remaining end cap as per Dwg D4308 4-Grind end cap weld flush as per dwg D2841 2-Drill, & sink hole on top and Rivet as per dwg QC10- Inspect visual per QSI004- ground welds	0.00 0.00							
180  QC Quality Control	QC10- Inspect visual per QSI004- ground welds  Memo	0.00 Sulata/14 inspect to PA2 Dwg only Sulata/14							

# Work Order ID 65197

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Item ID:	D4308-042	Accept		Setup	Start	
Revision ID:						
Item Name:	Step Weldment Assembly RH				Stop	
Start Date:	1/07/11	Start Qty:	1.00			
Required Date:	1/13/11	Req'd Qty:	1.00			
Reference:						

Approvals:	Process Plan:	Date:	Tooling:	Date:
	QC:	Date:	SPC (Y/N):	Date:

Run	Start	
	Stop	

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190  QC Quality Control	QC5- Inspect part completeness to step on W/O  Memo	0.00 - inspects to PA2 Dwg only Sublety							
200  HandFinish Hand Finishing	Chemical Conversion Coat per QSI005 4.1  Memo	0.00 0.00							
210  SprayPaint Spray Painting	Spray Painting per QSI005 4.2  Memo ***BLUE*** Primer: 115967 Paint: 115509 Clear: 115949	0.00 0.00							

215  
11.01.13  
perm. chg.

Wing Walk per dwg






M 115796



11 01 18 ①










# Work Order ID 65197

January 7, 2011 2:33:56 PM


Page 5

Item ID:	D4308-042	Accept		Setup	Start	
Revision ID:					Stop	
Item Name:	Step Weldment Assembly RH					
Start Date:	1/07/11	Start Qty:	1.00		Cust Item ID:	
Required Date:	1/13/11	Req'd Qty:	1.00		Customer:	
Reference:						

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	
	QC:	Date:	SPC (Y/N):	Date:		Stop	

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
220  QC Quality Control	QC3- Inspect Part Finish  Memo	0.00  0.00					11.01.20		
230  Packaging Packaging	Identify as per dwg & Stock Location:  Memo	0.00  0.00					11.01.20		
240  QC Quality Control	QC21- Final Inspection - Work Order Release  Memo	0.00  0.00					11/01/24		

ME  
11-01-24

POSITIVE RECALL  
EFFECTIVE 11/01/07 AUTH   
RELEASED \_\_\_\_\_ DATE \_\_\_\_\_

January 7, 2011 2:33:52 PM

Page 1





[REDACTED]



**Start Date:** 1/07/11**Required Date:** 1/13/11

**Start Qty: 1.00**

**Required Qty: 1.00**

**Comments:** IPP Rev:A 11.01.07 new issue DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2622-120 		Manufactured	No			100	Each	0.0000	0.05	0.052632		11.01.10 36/208	
Step Extrusion													
D2734 		Manufactured	No			120	Each	45.0000	1	1		11.01.10	
Step End Plate													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				WA	6/209			45			1		
					62931			45					
D2734 		Manufactured	No			170	Each	45.0000	1	1		11.01.24	
Step End Plate													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				WA				45			1		
					62931			45					
D3458-1 		Manufactured	No			120	Each	63.0000	1	1		11.01.10	
Step Mounting Plate													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				WA				63					
					51239			3					
					63075			60			1		

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
11.01.13		DRILL Ø 0.129 HOLE, CSK Ø 0.225x100° FOR VENTING, INSTALL MS20601AD4WL RIVET PRIOR TO PAINT				 11.01.13 PSJ 042	
11.01.13	215	WING WALK PAINT TOP SURFACE PER ØS WS 4.4				 11.01.13 PSJ 042	

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action      Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries







**Dart Aerospace Ltd**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

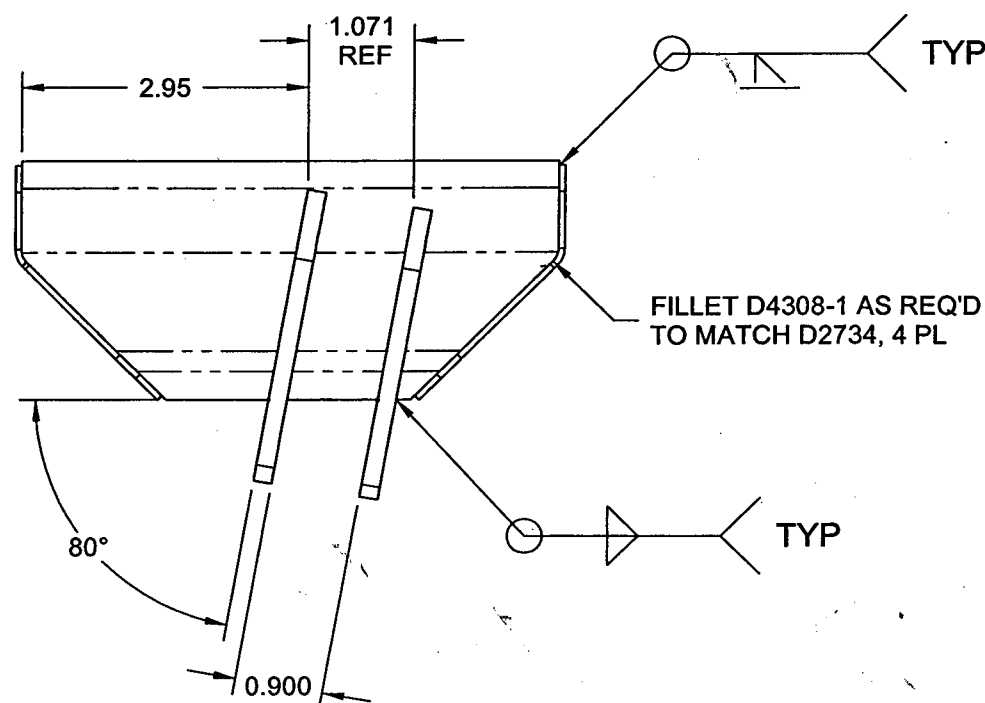
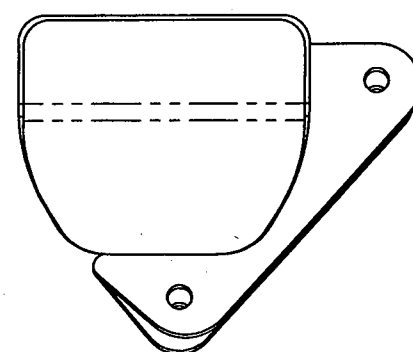
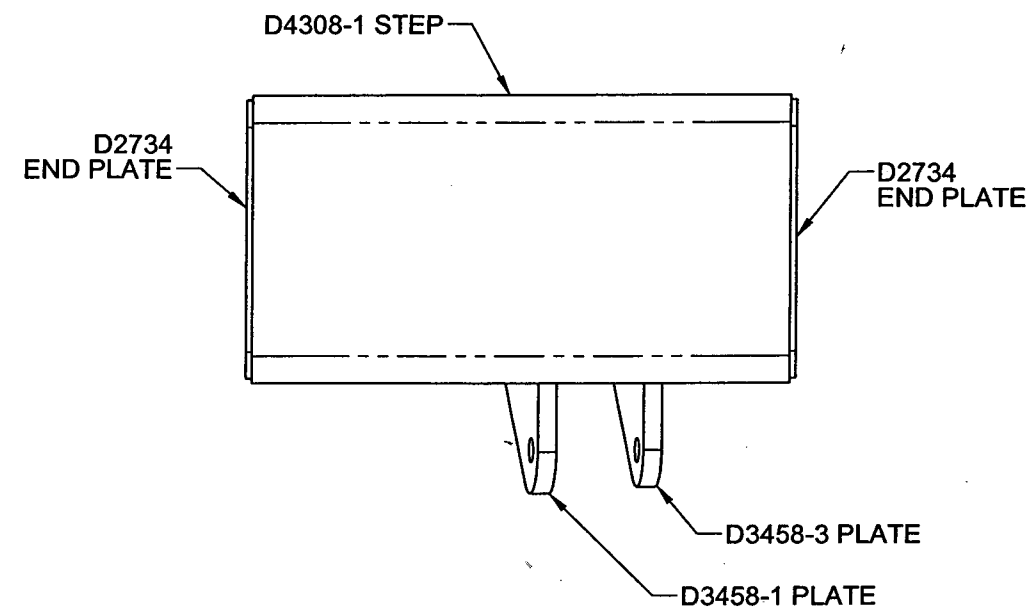
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
11/01/12	#170	SCRAPED 1st part. welder couldn't get holes from welding close to allow air out.	CP 11.01.12 ASMR	-Scrap + Destroy + Refile All Dam B's	SK 11.01.14	S 11/01/14	CP 11.01.12 ASMR	S 11/01/12
		R.C. process  D4308-1 SCRAP QTY 1						

**NOTE:** Date & initial all entries

ITEM	QTY -042	P/N	DESCRIPTION
1	X	D4308-042	STEP, RH CREW
2	1	D4308-1	STEP
3	2	D2734	END PLATE
4	1	D3458-1	PLATE
5	1	D3458-3	PLATE



**D4308-042 STEP, RH CREW**

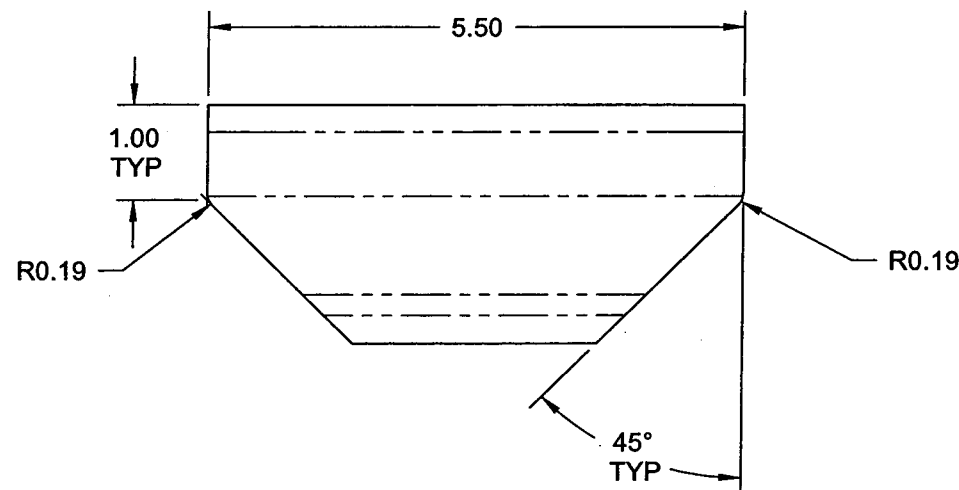
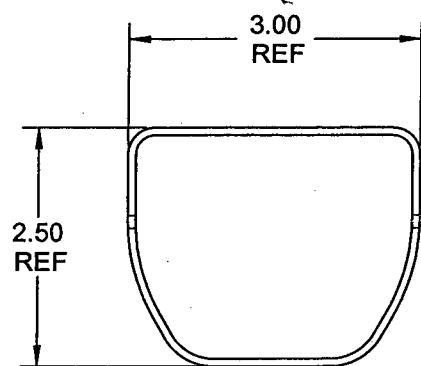
**NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
POWDER COAT "WHITE" (4.3.5.1) PER DART QSI 005 4.3 → PAINT BLUE PER QSI 005 4.2.2
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4308-042" AND B/N USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 0.47 lbs
- 8) WELDING: PER DART QSI 004

DESIGN	GP	<b>DART AEROSPACE LTD</b>
DRAWN	GP	HAWKESBURY, ONTARIO, CANADA
CHECKED	AS	DRAWING NO. <b>D4308</b>
MFG. APPR.		SHEET 2
APPROVED		TITLE <b>STEP, CREW</b>
DE APPR.		
DATE	10.12.17	

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**D4308-1 STEP**

**NOTES:**

- 1) MATERIAL: MAKE FROM D2622 EXTRUSION
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.33 lbs

**PRELIMINARY ISSUE**

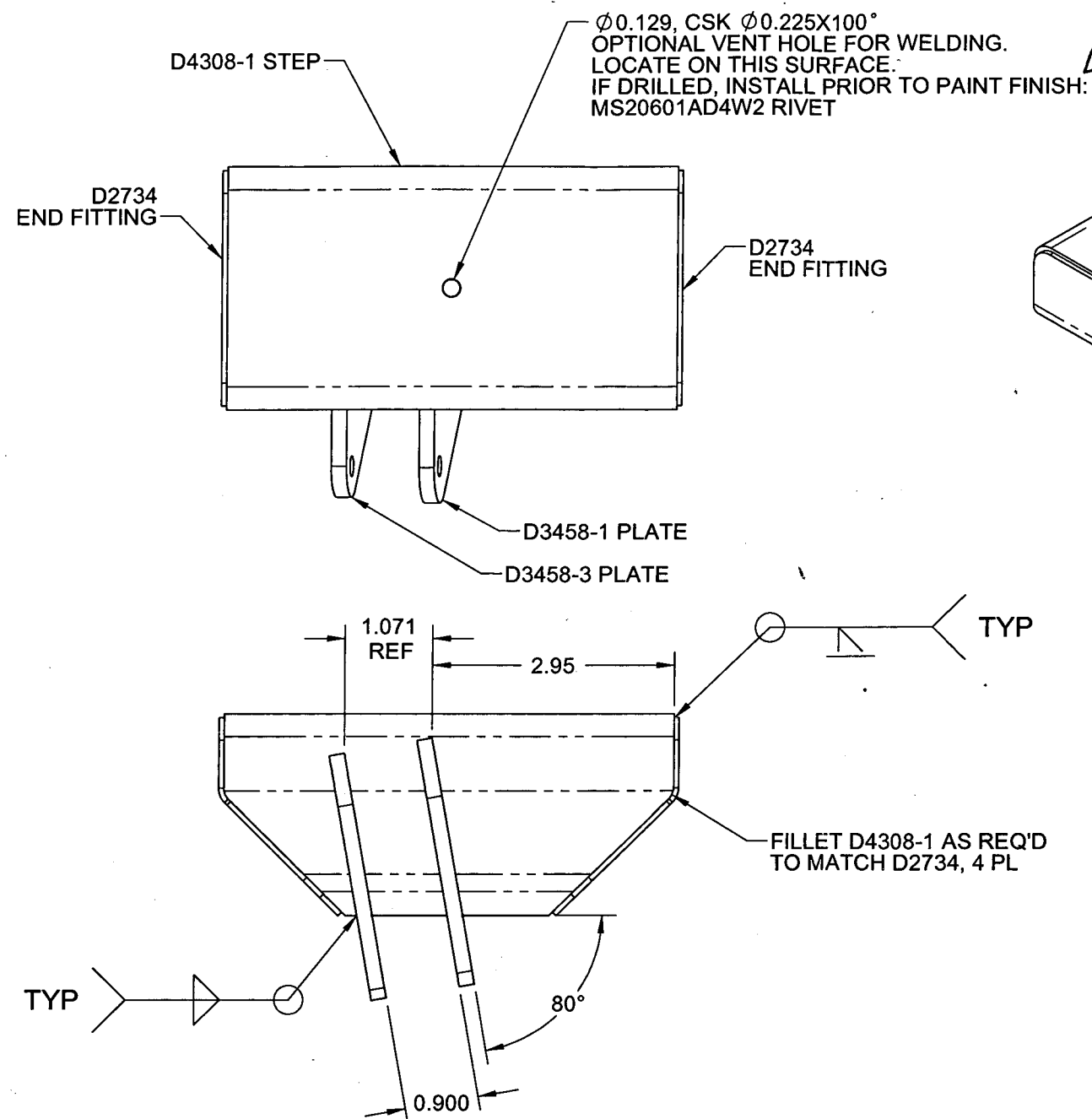
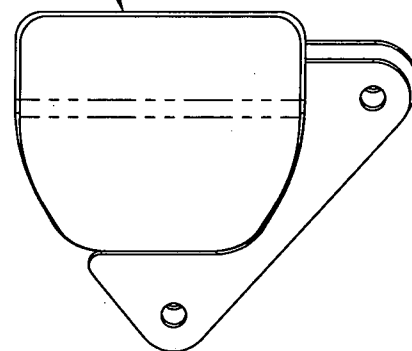
Rev PA1 6/11/07

DESIGN	93	<b>DART AEROSPACE LTD</b>	
DRAWN	93	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		<b>D4308</b>	SHEET 3 OF 3
APPROVED		TITLE	SCALE
DE APPR.		<b>STEP, CREW</b>	NTS
DATE	10.12.17	<small>COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	



ITEM	QTY -041	P/N	DESCRIPTION
1	X	D4308-041	STEP, LH CREW
2	1	D4308-1	STEP
3	2	D2734	END PLATE
4	1	D3458-1	PLATE
5	1	D3458-3	PLATE
6	1	MS20601AD4W2	RIVET (OPTIONAL)

APPLY BLACK  
ANTI-SKID ON TOP  
SURFACE TO BOTTOM  
OF TOP RADIUS



**PRELIMINARY ISSUE**

Rev PAZ 11.01.13

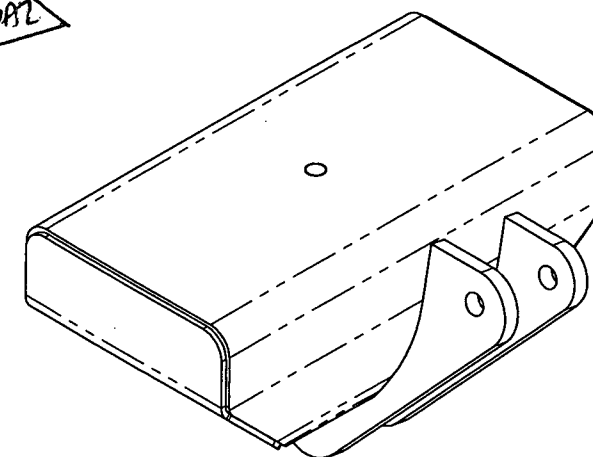
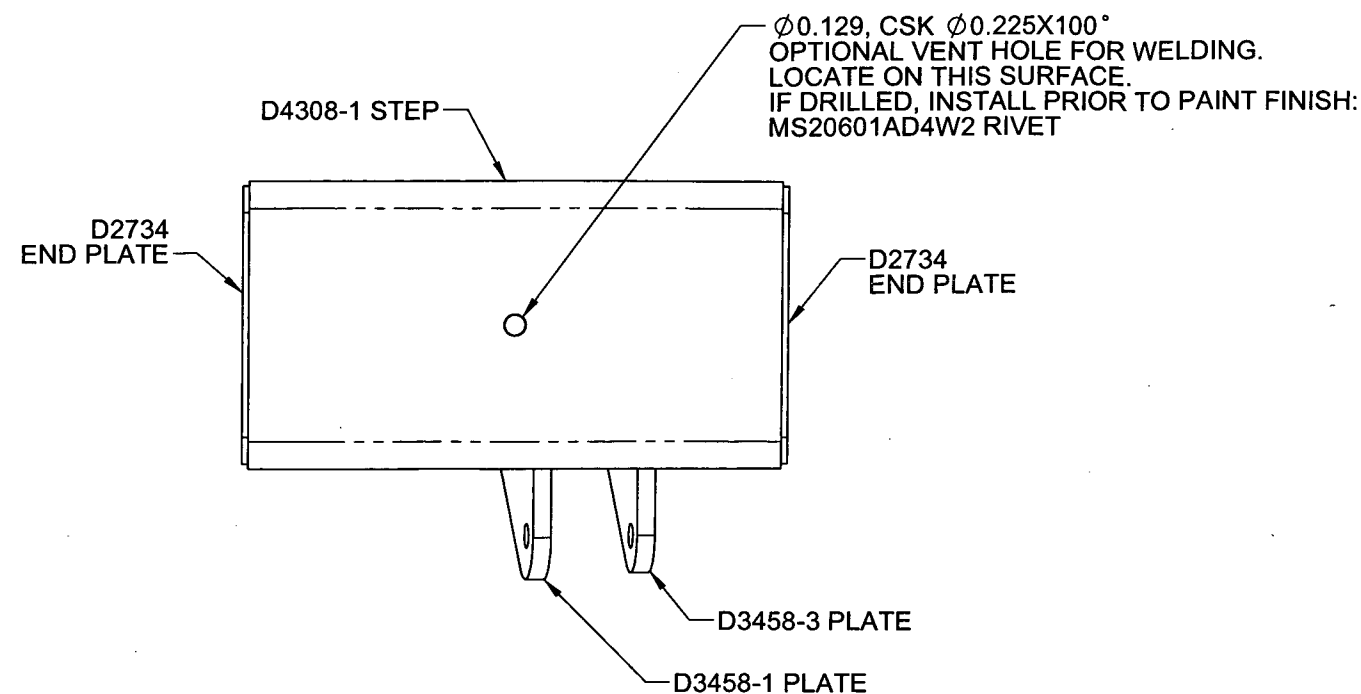
### D4308-041 STEP, LH CREW

#### NOTES:

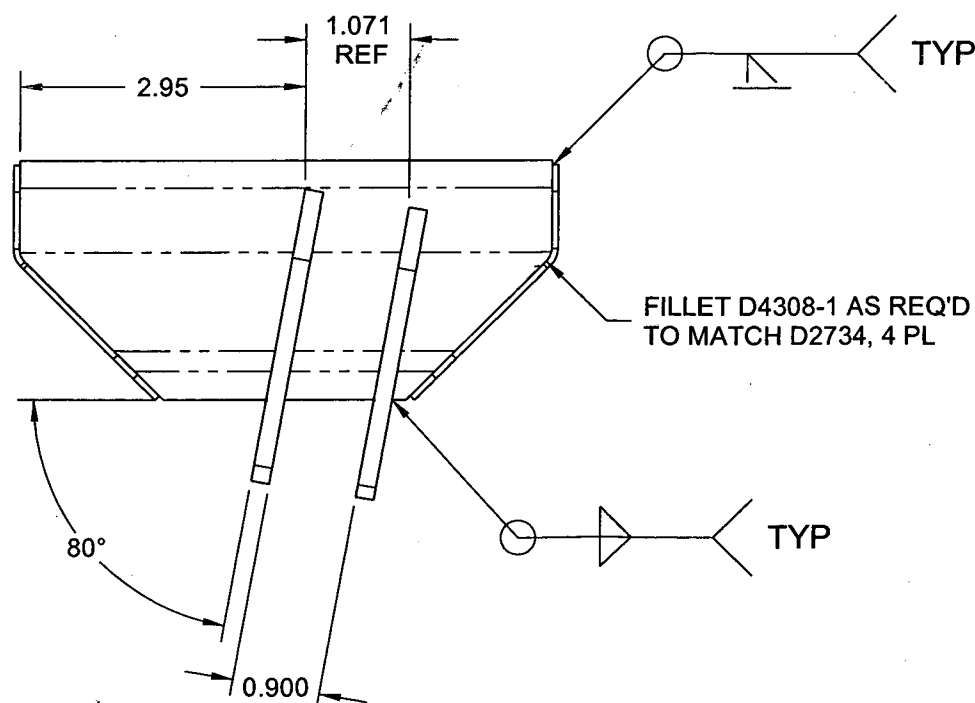
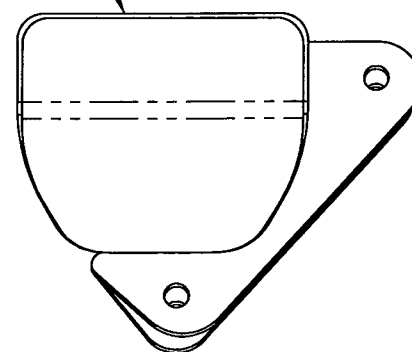
- 1) MATERIAL: N/A
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
POWDER COAT "WHITE" (4.3.5.1) PER DART QSI 005 4.3  
BLACK ANTI-SKID PAINT PER DART QSI 005 4.4
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4308-041" AND B/N USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 0.47 lb
- 8) WELDING: PER DART QSI 004

PAZ	ADD WING-WALK, VENT HOLE	CP	11.01.13
A	NEW ISSUE	CP	10.12.17
REV.	DESCRIPTION	BY	DATE
DESIGN	CP	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	CP		
CHECKED		DRAWING NO.	REV. A PAZ
MFG. APPR.		D4308	SHEET 1 OF 3
APPROVED		TITLE	SCALE
DE APPR.		STEP, CREW	NTS
DATE	10.12.17	COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

ITEM	QTY -042	P/N	DESCRIPTION
1	X	D4308-042	STEP, RH CREW
2	1	D4308-1	STEP
3	2	D2734	END PLATE
4	1	D3458-1	PLATE
5	1	D3458-3	PLATE
6	1	MS20601AD4W2	RIVET (OPTIONAL)



APPLY BLACK  
ANTI-SKID ON TOP  
SURFACE TO BOTTOM  
OF TOP RADIUS



### D4308-042 STEP, RH CREW

#### NOTES:

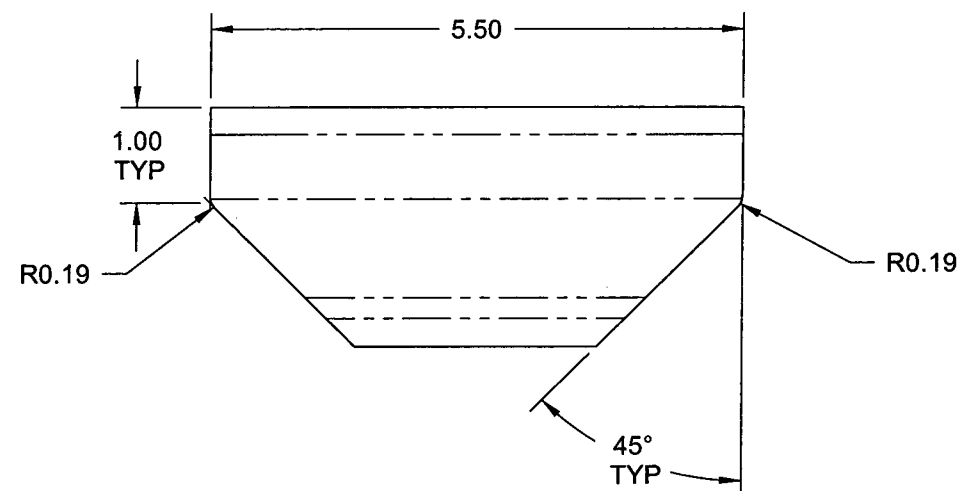
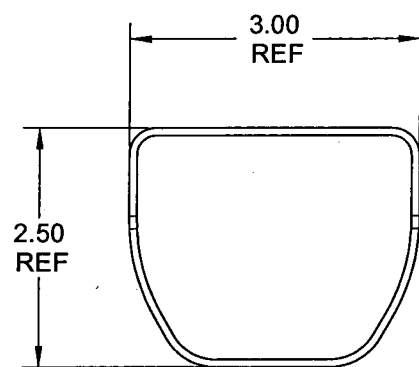
- 1) MATERIAL: N/A
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
POWDER COAT "WHITE" (4.3.5.1) PER DART QSI 005 4.3  
BLACK ANTI-SKID PAINT PER DART QSI 005 4.4
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4308-042" AND B/N USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 0.47 lbs
- 8) WELDING: PER DART QSI 004

**PRELIMINARY ISSUE**

Ra PAZ 11.01.13

DESIGN	JP	<b>DART AEROSPACE LTD</b>	
DRAWN	JP	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. A PAZ
MFG. APPR.		D4308	SHEET 2 OF 3
APPROVED		TITLE	SCALE
DE APPR.		STEP, CREW	NTS
DATE	10.12.17	<small>COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	





**D4308-1 STEP**

**PRELIMINARY ISSUE**

Rev PAZ CP 11.01.13

**NOTES:**

- 1) MATERIAL: MAKE FROM D2622 EXTRUSION
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.33 lbs

DESIGN	GP	<b>DART AEROSPACE LTD</b>	
DRAWN	GP	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		<b>D4308</b>	SHEET 3 OF 3
APPROVED		TITLE	SCALE
DE APPR.		<b>STEP, CREW</b>	NTS
DATE	10.12.17	<small>COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

